

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: An et al. Filed via EFS on
April 26, 2010
Title: METHOD AND SYSTEM FOR
ASSESSING LOAN CREDIT
RISK AND PERFORMANCE
Appl. No.: 10/816,496
Filing Date: 4/1/2004
Examiner: Trotter, Scott S.
Art Unit: 3694
Confirmation 8612
Number:

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Sir:

In accordance with the New **Pre-Appeal Brief Conference Pilot Program**, announced July 11, 2005, this Pre-Appeal Brief Request is being filed together with a Notice of Appeal.

REMARKS

In the Final Office Action of November 24, 2009, the rejection of claims 11-16 and 20-23 under 35 U.S.C. § 102(b) was maintained. In maintaining the rejection, the Examiner parroted the May 27, 2009 Non-final Office Action. Moreover, the Examiner set forth the following assertions in response to Applicant's August 25, 2009 Reply (responding to the May 27, 2009 Non-final Office Action and Applicant's arguments therein):

**Examiner's November 24, 2009 assertions in light of the
repeated rejection of claims 11-16 and 20-23**

As for the first and second mathematical model Keyes uses different models to arrive at the values depending on the amount of information available. (*See at least Keyes abstract.* Partial sample underwriting (one model) and inferred values of the remainder (second model).) Also whether a system has one complicated mathematical model or two or more mathematical models which are combined is completely subjective. Focus on what the “two models” are doing that is novel is more likely to yield a clear concept than a focus on one model or two.

Keyes uses “sample underwriting” which would involve all the factors that would effect the value of the loans being underwritten.

As for an adverse event that is drawn to finding the proper price for a set of loans the adverse event is the amount of defaulting of the loans involved and finding the proper price to pay inherently includes pricing in those adverse events.

Cluster valuation and confidence are measures of error and are stored and monitored as such.

The random drawing of error values is the clustering.

In Applicant’s February 24, 2010 Reply to the Final Office Action, Applicant again asserted that Keyes et al. fails to anticipate the claims of the present application. Furthermore, Applicant incorporated by reference in their entirety, the arguments presented in Applicant’s August 25, 2009 Reply because it appeared that while the Examiner repeated his rejection, the Examiner failed to substantially answer or rebut Applicant’s arguments presented in the August 25, 2009 Reply in violation of Section 707.07(f) of the MPEP.

In the March 9, 2010 Advisory Action responding to Applicant’s February 24, 2010 Reply, the Examiner asserted that “[a]s was said previously pricing the loans includes pricing the probability of default since that probability and its recoures [sic] effects the loans value.”

On April 23, 2010, a telephonic interview was conducted between Applicant’s representative and the Examiner, where the Examiner maintained his position that Keyes et al. anticipates claims 11-16 and 20-23 of the present application.

In light of the above, Applicant submits that the Final Office Action and the Advisory Action are improper for failing to substantially answer or rebut Applicant's arguments presented in the August 25, 2009 and the February 24, 2010 Replies. Moreover, Applicant incorporates herein by reference in their entirety, Applicant's arguments presented in those replies.

Summary of Applicant's response to the Examiner's November 24, 2009 and February 24, 2010 assertions and the rejection of claims 11-16 and 20-23

Keyes et al. fails to teach or suggest "constructing a first mathematical model..." and "constructing a second mathematical model for use with loans for which at least some of the loan data for the set of explanatory variables is not available;"

Keyes et al. is explicitly limited to considering merely risk assessment of a borrower;

Keyes et al. does not suggest the specific steps for creating the second mathematical model based on outputs of the first mathematical model;

Keyes et al. fails to disclose any "error values," let alone the use of error values in the manner set forth in the claims.

That is and while the Examiner appears to rely on the "partial sample underwriting" and "inferred values of the remainder" in Keyes et al. as corresponding to the claimed first and second models, the Examiner offers no explanation regarding how these features result in the same functionality as the claimed first and second mathematical models. Furthermore, Applicant submits that Keyes et al. teaches away from the interpretation set forth by the Examiner as Keyes et al. actually describes the use of "regression models" which cannot be interpreted as being analogous to the mathematical models of claims 11 and 20. Further still and while the Examiner asserted that the application of first and second models is, in his opinion, irrelevant, Applicant submits that the claimed subject matter is neither identically disclosed or described, nor are all the elements recited in Keyes et al. arranged or combined in the same way as in the claims at issue. Again, if the Examiner wishes to maintain his position, Applicant respectfully requests

that the Examiner explicitly describe how the teachings of Keyes et al. result in the same functionality as the claimed first and second mathematical models.

Additionally, Applicant submits that despite the description of “sample underwriting” provided in Keyes et al., nothing in Keyes et al. suggests either explicitly or implicitly, the consideration of more than just borrower risk. That is, Keyes et al. fails to teach the consideration of at least the following: (1) risk characteristics of the loan; and (2) risk characteristics of collateral for the loan. Therefore and again, if the Examiner wishes to maintain his position, Applicant respectfully requests that the Examiner explicitly describe how the “sample underwriting” as described in Keyes et al. necessarily suggests construction of a first mathematical model for a set of explanatory variables including those that relate to (1) risk characteristics of the loan and (2) risk characteristics of collateral for the loan, in addition to known risk characteristics of a borrower associated with the loan.

Further, Applicant submits that while Keyes et al. may be directed to pricing loans, nothing in Keyes et al. supports the Examiner’s assertion that such “loan pricing” inherently anticipates the determination of a “probability” of anything, let alone the probability of an “adverse event” as required in claims 11-16 and 20-23 of the present application. Moreover, despite the Examiner’s assertions regarding the allegedly inherent or “general” teachings of Keyes et al., Applicant submits that Keyes et al. cannot be interpreted as anticipating the following features of claims 11-16 and 20-23: “estimating the probability of the adverse event for a first group of loans for which the loan data is available for the set of explanatory variables using the first mathematical model;” “iteratively estimating the probability of the adverse event for the first group of loans using the second mathematical model;” “selecting an optimal set of weighting coefficients for the second mathematical model, the optimal set of coefficients being selected so as to minimize errors in outputs generated by the second mathematical model for the first group of loans relative to outputs generated by the first mathematical model for the first group of loans;” and “storing a set of error values, the set of error values relating to the errors in the outputs generated by the second mathematical when using the optimal set of coefficients

relative to the outputs generated by the first mathematical model.” That is, nowhere in Keyes et al. can any mention of the following features be found: iterative estimation of the probability of an adverse event; selection of “an optimal” set of weighting coefficients “to minimize errors in outputs generated by the second mathematical model; or storing a set of error values, where the set of error values relates to the errors in the outputs generated by the second mathematical model when using the optimal set of coefficients relative to the outputs generated by the first mathematical model. Although the Examiner asserted that such processes are known, Applicant respectfully requests that the Examiner show support for his assertions.

Lastly, the Examiner asserted that the random drawing of error values and the adjustment of outputs of the second mathematical model as disclosed in the claims of the present application is an allegedly known process referred to as “clustering.” Applicant submits that nothing in the description of “clustering” as set forth in Keyes et al. appears to be directed to “error values,” let alone anticipate the above-noted features recited in the claims at issue. If the Examiner wishes to maintain the position that clustering inherently/implicitly reads on such features of the present application, Applicant respectfully requests that the Examiner show/provide explicit support for his assertions.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance.

Respectfully submitted,

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By 

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